

SURVEY

2026 SANS State of Identity Threats & Defenses Survey Insights Event:

How Identity Became the New Security Perimeter—and What's Next

Written by **Rich Greene**
March 2026

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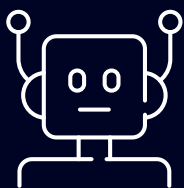
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Key Findings



The “Deployment vs. Resilience” Gap

High tool adoption has not correlated with low breach rates. While **68%** of organizations detect identity attacks within 24 hours, only **55%** contain them in that same window. This lag allows attackers to escalate privileges before the SOC intervenes.



The Non-Human Identity Crisis

Non-human identities (NHIs) are the fastest-growing identity category, with **76%** of organizations reporting growth. Yet they are the least governed with **92%** of organizations failing to rotate the majority of their NHI credentials on a 90-day cycle, creating a landscape of “forever access.”



Authentication Is Not Enough

Credential phishing accounts for only **35%** of attacks. The majority of incidents now involve techniques that bypass the login prompt entirely, such as session token hijacking (**23%**) and compromised browsers (**27%**).



The AI Shadow

73% of organizations are deploying agentic AI or automations that require credentials. This introduces a new class of identity that is not just automated but *autonomous*, entering production faster than governance frameworks can be built.



Business Impact

Identity failure is a brand crisis. **44%** of organizations cite reputation damage as a primary outcome of identity attacks, ranking it above many technical impacts.

Survey Author



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Rich Greene has spent his career on the front lines of cyber defense, translating high-stakes operational experience into practical, accessible training for today's defenders. A SANS Instructor and author of *SEC301: Introduction to Cyber Security*, one of the organization's most widely attended foundational courses, he is known for turning complex security concepts into clear, engaging lessons that resonate with learners at every level. His approach is shaped by more than two decades in military, intelligence, and cybersecurity operations (including service in U.S. Army Special Forces and cyber roles supporting missions across 17 countries) where secure communications and rapid decision-making were mission-critical. Those experiences forged his belief that effective defense begins with understanding how adversaries think, move, and exploit weaknesses.

After transitioning from military service, Rich built a career focused on strengthening cyber readiness across organizations. Through his company, SITH2, LLC, he helps teams improve detection, response, and defensive decision-making, insights that directly inform the hands-on labs and real-world scenarios in SEC301. He holds more than a dozen GIAC certifications across incident handling, threat intelligence, forensics, and leadership, along with the CISSP and advanced degrees in cybersecurity from the SANS Technology Institute. Whether teaching in the classroom, speaking on podcasts and conference stages, or designing immersive learning experiences, Rich brings energy, clarity, and a mission-driven commitment to developing the next generation of defenders. His students consistently describe him as engaging, inspiring, and transformative, an instructor who makes cybersecurity not just understandable, but exciting and achievable.

Executive Summary

For a decade, the cybersecurity industry operated on a tacit assumption that modernizing authentication stacks with single sign-on (SSO) and multi-factor authentication (MFA) would suffocate the breach epidemic. The 2026 SANS Identity Threat Detection and Response (ITDR) Survey proves this assumption is dangerous. The defining finding is what we call the “deployment vs. resilience” gap: Although 68% of organizations detect identity attacks within 24 hours, only 55% contain them in that same window. Organizations have invested in the sensors to hear the alarm but have not yet built the operational muscle to put out the fire.

The survey reveals a defining paradox. Identity security tools are widely deployed, with 85% of organizations reporting active use of ITDR capabilities. Yet 55% of these same organizations admit to experiencing an identity-related compromise in the past 12 months. This gap signals that the industry has entered a new phase of conflict. The challenge is no longer about purchasing technology; it is about operationalizing it against a threat landscape that has changed shape.

Although security teams successfully hardened human access, the attack surface shifted to the side windows: non-human identities (NHIs), post-authentication sessions, and autonomous AI agents. Critically, the majority of attack techniques identified in this survey—session token hijacking, compromised browsers, and OAuth abuse—occur after authentication succeeds. The threat landscape has moved beyond the login prompt. Organizations are fighting a modern war with outdated maps, heavily invested in protecting logins while attackers exploit what happens after the front door opens: ungoverned sessions, static service account credentials, and trusted integrations.

This analysis serves as a strategic roadmap. It moves beyond adoption statistics to analyze *why* identity defenses are failing in practice and provides actionable guidance for closing the gap between perceived readiness and actual risk.

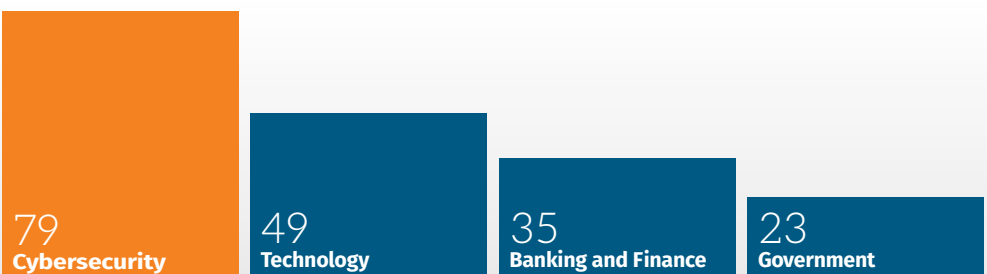
The survey exposes a core paradox: Identity security tools are everywhere, but identity breaches are still common.

Demographics

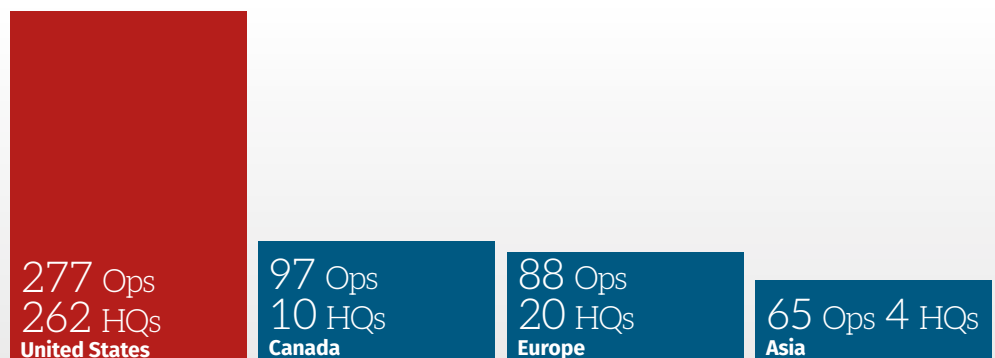
To understand the state of the industry, this analysis draws upon data collected from the 2026 SANS Identity Threat Detection and Response (ITDR) Survey. The respondent base represents a diverse global cohort of cybersecurity professionals.

Most respondents were based in the United States (85%) with participants also from Europe, Canada, Africa, Asia, and Australia. The top industries represented were the usual mix of respondents from technology, banking and finance, government, and telecommunications. There was a diverse representation of organization size with the largest showing from organizations ranging from 100-1,000 employees. The survey captures insights from across the organizational hierarchy. Respondents range from technical practitioners (security architects, SOC analysts) to strategic decision-makers (CISOs, Directors of Identity). This blend highlights the frequent misalignment between executive perception of risk and practitioner reality Figure 1 shows the survey demographics in detail.

Top 4 Industries Represented



Regions



Top 4 Roles Represented



Figure 1. Demographics of Survey Respondents

Environment Scope

The data reflects the complexity of modern infrastructure. Respondents largely manage hybrid identity environments utilizing a complex mix of:

- **On-premises infrastructure**—Traditional Active Directory remains critical for 45% of respondents.
- **Cloud identity providers (IDPs)**—Platforms like Microsoft Entra ID and Okta serve as the primary control plane.
- **Multicloud infrastructure**—AWS, Azure, and GCP environments where workload identities proliferate.

It is important to note that the majority of respondents do not operate purely on-premises or purely in the cloud. The norm is hybrid with overlapping environments managed simultaneously, where a single identity transaction may traverse on-premises Active Directory, a cloud IDP, and a SaaS application in a single session. This hybrid reality is a defining characteristic of the modern identity attack surface and a recurring theme throughout this analysis.

Methodological Note

We pay special attention to “negative space” in the data. Where respondents indicated “Unknown,” we interpret that lack of visibility as a critical finding. In identity security, what you do not know usually represents your highest risk.

The ITDR Effectiveness Paradox

The survey data presents a striking contradiction. With 85% of respondents reporting that their organizations currently deploy ITDR tools, one would think that widespread adoption should correlate with a decline in intrusions. Instead, identity-related compromises remain stubbornly prevalent.

Among the organizations surveyed, 55% experienced at least one identity-related cyberattack leading to unauthorized access within the past 12 months. Even more concerning, 21% reported multiple incidents (see Figure 2).

In the past 12 months, has your organization experienced an identity-related cyberattack that led to unauthorized access or a compromise?

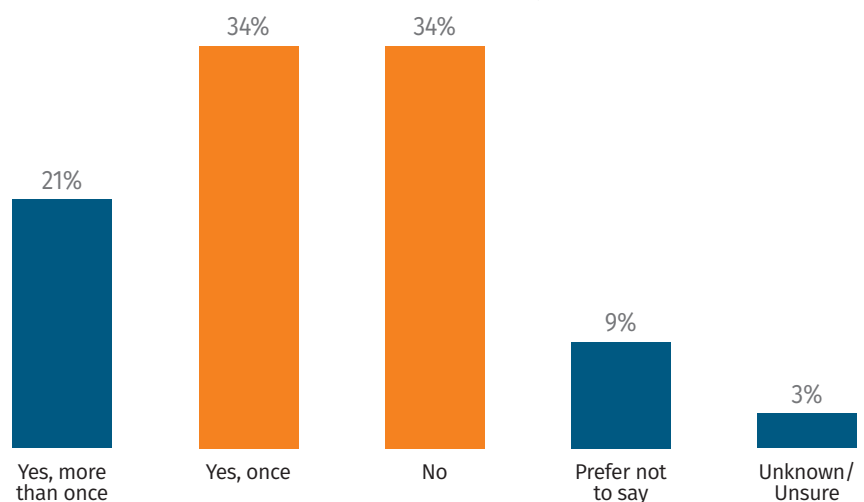


Figure 2. Identity-Related Cyberattacks Leading to Unauthorized Access or Compromise

The Operational Gap

This disconnect does not suggest that ITDR technology is flawed. Organizations are correct to invest here as attackers are clearly targeting identity. The problem lies in the distance between procuring a solution and operationalizing it. Many ITDR deployments exist in name rather than in practice. These may be pilot programs that never expanded, implementations limited to narrow use cases, or alert-generating systems that organizations lack the resources to act on.

We are witnessing a “containment lag.” The survey indicates that while most organizations detect identity attacks within 24 hours, significantly fewer contain them in that same window. This gap allows attackers time to escalate privileges, move laterally from on-premise Active Directory to cloud infrastructure, or exfiltrate data before the SOC can intervene.

In short, organizations have built the sensors to hear the alarm, but they have not yet built the muscle memory to put out the fire. This paper examines that gap, exploring how deployment patterns and organizational constraints shape whether these tools protect organizations or merely provide a false sense of coverage.

What’s Working: Detection and Investment Momentum—Despite the containment gap, the data reveals genuine forward motion. 41% of breached organizations detect identity attacks within four hours. 45% of organizations report ITDR at broad deployment or mature stages. And 79% plan to increase ITDR investment over the next 12 months, with 44% planning increases of 10–25%. The sensors are working; the operational muscle to act on them is what needs to catch up.

Key Findings and Thematic Analysis

The survey results coalesce around five major themes that define the state of identity security in 2026. These themes reveal an industry struggling to adapt legacy governance models to a hyper-connected reality.

Theme 1: Identity Has Changed Shape (from Humans to Systems)

The vocabulary of identity security still carries the weight of an earlier era when “identity” meant a human employee. That mental model no longer matches reality.

The Explosion of Non-Human Identities

75% of respondents report growth in their organization’s use of NHIs over the past year. Only 13% report no change. The identity perimeter has quietly doubled or tripled in size, but the new population consists of service accounts, API keys, and automation bots (see Figure 3).

These identities operate according to different rules. They authenticate continuously, do not use MFA, and often hold elevated privileges because they automate critical infrastructure tasks.

The Dispersion of Risk

Critical identities no longer reside in a single directory. When asked where their most critical identities live, respondents revealed a fractured landscape:

- 47% cite legacy/on-prem AD.
- 43% cite cloud infrastructure (AWS IAM, Azure RBAC).
- 38% cite DevOps/CI/CD pipelines.
- 35% cite third-party integrations (OAuth/OIDC).

Analysis: Security teams are trying to defend a fragmented empire. Attackers understand this fragmentation better than defenders do, targeting the gaps between these silos. The high ranking of DevOps environments (38%) is particularly alarming as these environments often prioritize speed over access control.

Identity isn’t just about people anymore. It’s about machines, bots, and AI, and security teams are losing the race to govern them.

How has your organization’s use of non-human identities evolved in the last 12 months?

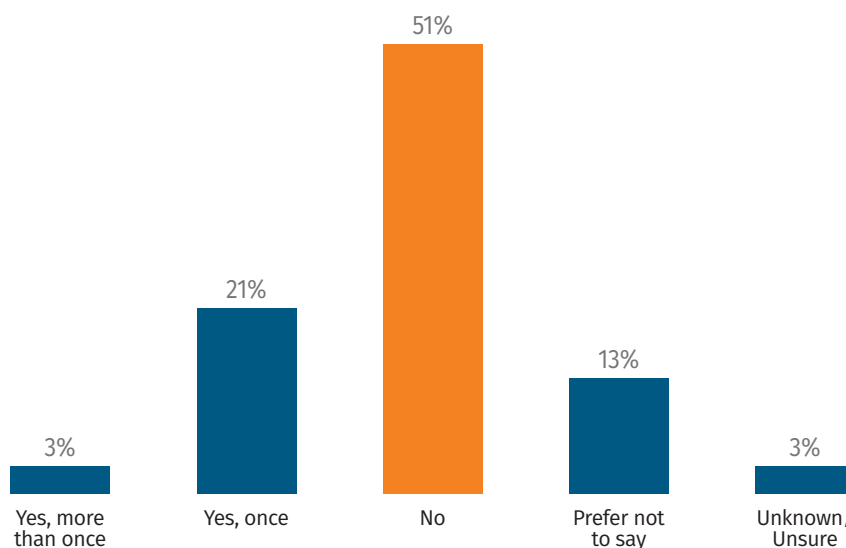


Figure 3. Growth in Non-Human Identities

Theme 2: The Hygiene Crisis in NHIs

If NHIs are the fastest-growing attack surface, they are also the most neglected. The survey exposes a systemic failure in basic hygiene for machine credentials.

The Rotation Gap

Credential rotation is the most basic defense against long-term compromise. Yet the data shows that rotation is the exception:

- Only 8% of organizations rotate most (>75%) of their NHI credentials every 90 days.
- 15% admit they *don't know* their rotation rate.
- The majority (59%) rotate fewer than half of their NHI credentials quarterly.

The Implications of Static Secrets

This means the vast majority of service account keys and API tokens are static. They persist for months or years, often hardcoded in scripts or buried in config files.

The reason for this failure is rarely negligence; it is operational fear. Unlike a human user who notices a password reset, a service account simply breaks when its key is changed. This causes downtime and discourages operations teams from touching them. Organizations are effectively prioritizing operational uptime over security hygiene, leaving the keys to the kingdom exposed for years.

However, the rotation gap is a symptom of a deeper structural problem: The governance model for NHIs is inherited from human identity management. Periodic access reviews, manual rotation schedules, and ticket-based provisioning were designed for populations of hundreds or thousands of human users. They do not scale to NHI populations that number in the tens of thousands, authenticate continuously, and span cloud platforms, CI/CD pipelines, and SaaS integrations. Until organizations recognize that NHI governance requires a fundamentally different program model—one built for machine-scale life cycle management rather than human-scale periodic review—the rotation gap will persist regardless of policy mandates.

What's Working: NHI Controls Gaining Traction. The picture is not entirely bleak. 34% of organizations have deployed secrets vaults to eliminate hardcoded keys. 33% report automated key and secret rotation in place. 33% enforce scoped, least-privilege roles for NHIs. And 31% have implemented CI/CD signing and provenance controls. Additionally, 37% of organizations report NHI Management programs at broad deployment or mature stages, with another 26% in early adoption. The foundation is being laid. The challenge is scaling it to match NHI population growth.

Theme 3: Authentication Reality (The Hierarchy of Protection)

We have achieved consensus on MFA for employees, but universal enforcement remains a myth. The data reveals a distinct “Hierarchy of Protection” where security degrades rapidly as you move away from the core workforce. To understand where organizations are truly protected, and where they are exposed, it helps to break this hierarchy down:

- **Employees: High coverage**—Security teams have successfully mandated MFA here.
- **Contractors: A major gap**—73% of organizations fail to enforce MFA on all partner/contractor accounts. This is a critical vulnerability as contractors often have elevated access to internal systems (IT support, development) but operate outside the corporate device trust boundary.
- **Customers: 38% enforce MFA on less than half of customer accounts**—This reflects the tension between security and user experience (UX). Businesses fear friction will drive customers away, leaving data vulnerable to credential stuffing.
- **Non-human identities: The bottom of the hierarchy**—46% require MFA for fewer than half of NHIs (often 0).

The Phishing-Resistant Gap

While organizations know that legacy MFA (SMS, OTP) is bypassable, adoption of phishing-resistant tech (FIDO2/Passkeys) is critically low:

- Only 7% of organizations report broad passkey support across business-critical apps.
- 36% report no or almost no support.

We’re investing heavily in securing the front door (employees) while leaving the side doors (contractors) and back windows (NHIs) exposed. Attackers simply take the easiest path in (see Figure 4).

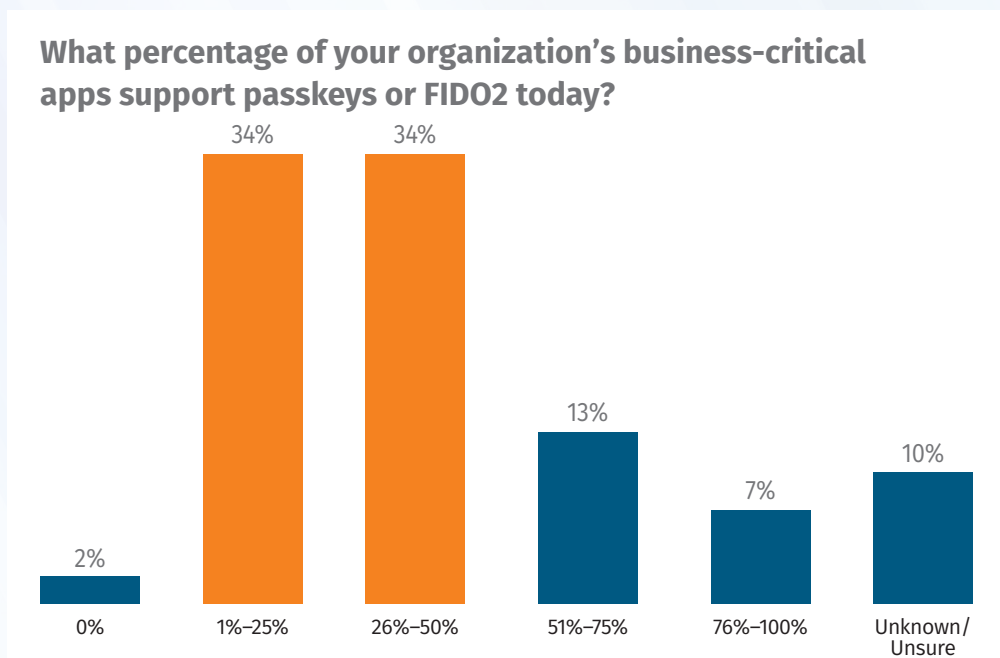


Figure 4. Business-Critical Apps that Support Passkeys or FIDO2

Theme 4: Attackers Are Multidimensional

Security teams often optimize for “preventing the login” by blocking brute force attacks. The data proves attackers have moved on.

Although credential phishing (35%) is a top factor, it is not the *only* factor. Attackers use a diverse menu of techniques to bypass authentication controls:

- **Compromised browsers (27%)**—Attackers steal the session token directly from the browser cookies, bypassing MFA entirely.
- **MFA fatigue (26%)**—Attackers spam users with push notifications until they accept.
- **Token hijacking (23%)**—Replaying valid session tokens to gain access without credentials.

The Failure of Event-Based Detection

The rise of session hijacking and privilege escalation highlights the failure of “event-based” detection. A single log entry (an authentication event) might look innocent. A marketing user accessing a finance app is valid if they have permission. A session token being used from a new IP might be travel.

However, the *sequence* reveals the attack. Traditional SIEMs often struggle to correlate these disparate events across cloud, on-prem, and SaaS environments. Real detection requires monitoring post-authentication behavior, meaning what the identity does after it gets in.

This points to an architectural limitation in how identity security has been built. Traditional detection architectures concentrate visibility at the authentication boundary: login events, failed attempts, MFA challenges. The post-authentication layer—what identities do with their access once inside—remains largely unmonitored. SSO validates the login. MFA strengthens the login. SIEM logs the login. But the session that follows, where privilege escalation, lateral movement, and data exfiltration actually occur, often falls into a visibility gap. Closing this gap requires extending detection and governance into the post-authentication layer, not just strengthening the perimeter around it.

What’s Working: Post-Authentication Visibility Is Emerging—Organizations are beginning to extend monitoring beyond the login prompt. 45% report continuous authentication or session risk scoring at broad deployment or mature stages. 41% enforce conditional access policies based on geo, device, or risk signals. 37% use risk-based step-up or continuous re-authentication during active sessions. And the top signals improving identity detections are endpoint/EDR telemetry (46%) and IdP sign-in and risk logs (34%)—both of which provide behavioral context beyond the initial authentication event.

Theme 5: The Next Crisis (Agentic AI)

The survey identifies a governance challenge that mirrors the NHI sprawl of the cloud era but introduces a new variable: autonomy.

74% of organizations are already using AI agents or automations that require credentials. These are not passive chatbots or deterministic scripts. They are autonomous actors executing transactions, modifying infrastructure, and accessing customer data based on nondeterministic decision-making. At their core, however, they are still identities—and they require the same governance fundamentals as any other identity: inventory, least privilege, time-bounded access, and auditability.

The Governance Lag

Despite this rapid adoption, governance is nonexistent:

- No single control (approvals, audit trails, sandboxing) is used by more than 40% of respondents.
- 5% of security leaders *don't know* if agentic AI is running in their environment.

This matters because traditional NHIs follow fixed logic; if you check the code, you know what they will do. AI agents interpret instructions. An ungoverned AI agent is essentially an overprivileged insider threat that operates at machine speed with the ability to hallucinate actions. Organizations are deploying “decision-making” capabilities without “decision-constraining” governance. The industry failed to govern NHIs early in the cloud era and is still paying the price. Agentic AI presents the same governance challenge on a compressed timeline, and the window to get ahead of it is narrowing.

What’s Working: Early Governance of AI Agents—Unlike the NHI story, organizations appear to be building governance earlier in the adoption cycle for agentic AI (see Figure 5). 37% have implemented human-in-the-loop approvals for AI agent actions. 31% require mandatory audit trails and watermarking. 30% deploy runtime sandboxes or policy guardrails. And 28% use secrets brokers to avoid giving AI agents long-lived credentials. These are meaningful controls. The question is whether they will scale as agentic AI moves from pilot programs to production workloads.

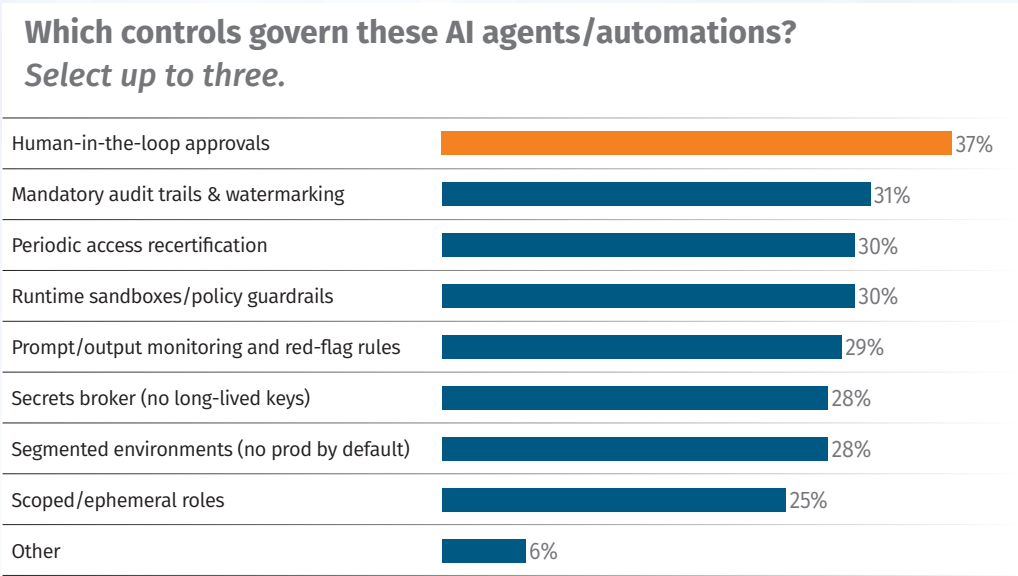


Figure 5. Controls Used to Govern AI Agents/Automations

Anatomy of a Modern Attack

To see why today's identity defenses are failing, it helps to follow how the survey findings play out across a modern attack chain. The era of "single point of failure" breaches is over, today's attacks unfold in phases, with each step exploiting a different identity weakness. The following is a representative, four-phase sequence that shows how separate control gaps compound into a full-scale compromise:

- **Phase 1: Initial access via the weakest link**—The attacker does not target the CEO's corporate laptop. Instead, they target a contractor (protected by SMS MFA, per the 66% gap) or a service account with hardcoded credentials found in a public repository (a symptom of the 92% rotation failure).
- **Phase 2: Evasion via session abuse**—Once inside, the attacker utilizes token hijacking (23%). They export the session cookies from the compromised contractor's browser. Now they *are* the contractor. They access the SaaS portal without triggering a new MFA prompt. The identity provider sees a valid token and assumes all is well.
- **Phase 3: Lateral movement via NHIs**—Inside a code repository, the attacker finds a hardcoded cloud API key (NHI) that has not been rotated in two years. This key has "Admin" privileges because the developer wanted to avoid permission errors. This is the pivot point where the attack moves from "User Identity" to "Workload Identity."
- **Phase 4: Impact via integration abuse**—Using the API key, the attacker creates a new OAuth application (16% of attacks involved OAuth abuse). They grant this malicious app "Read All Email" permissions. The attack is now persistent. Even if the contractor resets their password, the malicious app retains access.

Modern identity attacks don't break in, they chain together, exploiting contractors, sessions, NHIs, and integrations to turn small gaps into full-scale compromise.

The Failure of Traditional Detection

Throughout this chain, no "failed login" alerts were generated. The attacker used valid credentials and valid tokens. To a traditional SIEM relying on event-based logs, this looks like business as usual. This illustrates why 55% of organizations are breached despite having tools: The tools are looking for *events* (failed logins), but the threat is *behavior* (unusual access).

The failure here is not just one of detection methodology—event-based vs. behavioral—but of detection scope. Every phase of this attack chain succeeded using valid credentials and valid sessions. Controls that concentrate visibility at the authentication boundary cannot see the lateral movement, privilege escalation, and integration abuse that follow. This gap between authentication-layer security and post-authentication activity is where modern identity attacks live, and it is where the next generation of ITDR capabilities must operate.

Barriers to Maturity and Business Impact

Why does the industry struggle to close these gaps? The survey points to structural and financial barriers rather than technical impossibilities:

- **The budget barrier—38%** of respondents cite budget constraints as the top barrier to effective ITDR deployment. Identity security is often viewed as “plumbing” rather than a frontline defense. It struggles to compete for budget against more visible threats like ransomware, even though identity is the primary vector for ransomware.
- **Legacy anchors**—Reliance on legacy protocols (cited in 19% of attacks) persists because organizations cannot easily retire critical business apps that rely on NTLM or LDAP. This forces security teams to maintain “downgrade” paths that attackers exploit. Organizations are effectively paying a “security tax” for every piece of legacy infrastructure they refuse to retire.
- **The business consequences**—The cost of this under-investment is high and visible. When asked about the primary impact of identity-related attacks, respondents cited (see Figure 6):
 - **Reputation or brand damage (44%)**—Identity breaches are visible public events that erode trust.
 - **Service disruption (40%)**—Identity is the control plane. When it goes down, business operations halt.
 - **Loss of shareholder value (30%)**—Markets punish identity failure swiftly.

This data provides a clear narrative for security leaders seeking budget. Identity security is not an IT ticket; it is a brand preservation strategy.

What was the most important business impact of these attacks? Select up to the three most important.

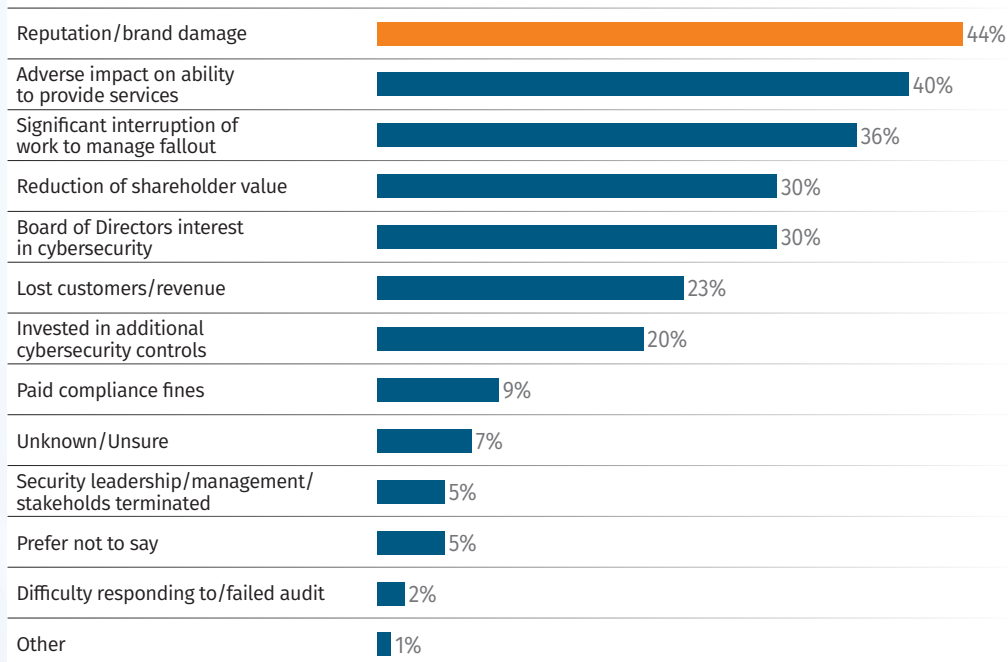


Figure 6. Business Impact of Identity-Related Cyberattacks

Strategic Implications for Organizations

The data dictates five immediate shifts for security leadership. The time for “identity awareness” is over and the time for “identity operations” has begun:

- 1. Rebalance the portfolio from prevention to detection.** Prevention (MFA, SSO) is necessary but insufficient. With a 55% compromise rate, organizations must assume the perimeter will be breached. Investment must shift toward ITDR capabilities that can spot:

- Lateral movement via service accounts
- Abnormal usage of valid session tokens
- Privilege escalation in SaaS platforms

Equally important, organizations should invest in proactive governance that enforces policy at the time of action—at the moment of an access request or privilege change—rather than relying solely on retroactive detection after a violation has occurred. Proactive governance reduces the threat surface that ITDR must monitor, making detection programs more focused and effective.

- 2. Treat NHIs as privileged users.** Stop treating service accounts as “infrastructure configuration” and start treating them as VIP users.

- **Immediate action**—Inventory all NHIs. If you can’t see them, you can’t rotate them. Use discovery tools to scan code repositories and cloud environments for static keys.
- **Goal**—Move from static long-lived secrets to short-lived, federated credentials (e.g., OIDC) to kill the value of a stolen key. Short-lived credentials limit the attacker’s window of exploitation. A stolen token that expires in 60 minutes cannot be used for persistent access or lateral movement days later, dramatically reducing the blast radius of any single compromise.

- 3. Operationalize the SOC for identity.** Identity is now a Big Data problem. A SOC analyst looking at a firewall log cannot see an identity attack. Identity telemetry must be integrated into SOC workflows.

- **The metric that matters: Mean Time to Contain**—If you detect in 24 hours but contain in 48, you have lost the battle.
- **Automation**—Detection logic must be coupled with automated response actions. For example, if a high-fidelity alert triggers for “impossible travel,” the system should automatically suspend the user or revoke their session token without

waiting for a human analyst.

4. Bridge the cultural divide (IAM vs. SecOps). A subtle but critical implication

is the friction between IAM teams (who own the directory) and SecOps teams (who own the response). Successful ITDR requires these teams to fuse their operations. IAM must care about logs. SecOps must understand authentication flows.

5. Looking forward: The

future of ITDR—

The next 12 to 36 months will see ITDR move from a “tool category” to an operational discipline (see Figure 7). The market is maturing, and expectations are rising.

- **Identity security will become non-human by default**—As AI and automation scale, human logins will become the minority of authentication events. Defenses designed for human behavior (biometrics, 9-to-5 patterns) will fail. Behavioral baselining for machine identities will become the primary requirement.
- **The rise of “immune system” response**—Manual response is too slow for machine-speed attacks. We will see a shift toward automated containment where identity systems self-heal by automatically rotating compromised keys or stepping up authentication requirements in real-time when risk is detected.
- **Consolidation of visibility**—The fragmentation of identity (cloud vs. on-prem vs. SaaS) is unsustainable. Organizations will demand a “unified identity control plane” that provides a single view of risk across the entire ecosystem.

What are your organization's most important ITDR use cases for the next 12 months? Select up to three.

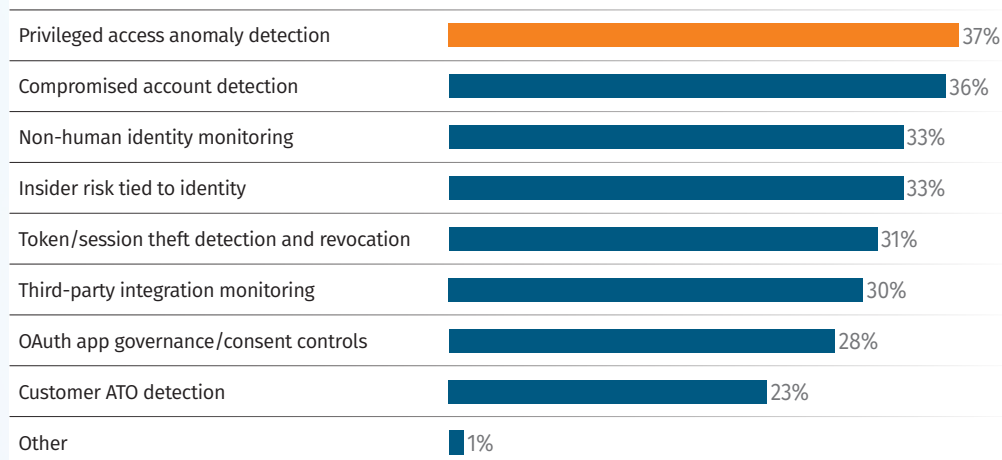


Figure 7. Expected ITDR Use Cases for the Next 12 Months

Conclusion

Most organizations have successfully deployed the *technologies* of identity security. They have bought the tools. But they have not yet mastered the *operations* of identity resilience. Attackers no longer need to break in. They simply log in. They use what already exists: legitimate credentials, valid sessions, and trusted integrations. To defend against this, organizations must stop looking at identity as a static list of users and start treating it as a dynamic, living attack surface.

The future belongs to organizations that can answer four questions:

1. Can we see every identity (human and machine)?
2. Can we detect when a valid identity behaves badly?
3. Can we see and govern what an identity does after it authenticates?
4. Can we stop it before it leaves the blast radius?

This report is not a verdict on failure; it is a call for recalibration.

The data shows we are not there yet. But it also shows us exactly where we need to go. For organizations looking to act on these findings immediately, we recommend five concrete starting points:

1. **Measure your containment gap.** Run a tabletop exercise or review your last identity incident and compare your Mean Time to Detect against your Mean Time to Contain. If there is a gap, identify whether the bottleneck is technical (lack of automated response), procedural (unclear escalation paths), or organizational (IAM and SecOps operating in separate workflows). This single metric will tell you more about your ITDR maturity than any deployment dashboard.
2. **Inventory your NHIs.** You cannot govern what you cannot see. Conduct a discovery scan across cloud environments, code repositories, CI/CD pipelines, and SaaS integrations to catalog every service account, API key, and automation credential. Assign an owner to each one. The 92% rotation failure starts with the fact that most organizations do not know what NHIs they have, let alone who is responsible for them.
3. **Extend MFA to contractors and third parties.** The data shows that 73% of organizations do not enforce MFA across all contractor and partner accounts. These identities often have elevated access but operate outside the corporate device trust boundary, making them the path of least resistance for attackers. Prioritize phishing-resistant methods (FIDO2/passkeys) where possible, as legacy MFA (SMS, OTP) remains bypassable.

4. **Add post-authentication monitoring to your detection stack.** Evaluate whether your current detection capabilities can see what happens after a successful login. Specifically, ensure you have visibility into session token usage patterns, privilege escalation within SaaS platforms, and anomalous access to resources that do not match an identity's historical baseline. If your SIEM only alerts on failed logins, you are monitoring the wrong layer.
5. **Establish governance for agentic AI before it scales.** If your organization is among the 73% deploying AI agents or automations with credentials, implement foundational controls now: Require human-in-the-loop approvals for high-risk actions, enforce least-privilege and time-bounded access for every AI agent identity, maintain audit trails for all autonomous actions, and use secrets brokers rather than long-lived credentials. The cost of building governance early is a fraction of the cost of retrofitting it after an incident.

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PRODUCT BRIEFING

Stopping Compromised Passwords Before They Lead to Account Takeover: Using Enzoic to Secure Your Login Flows

Insights from SANS State of Identity Threat Detection and Response 2026

March 2026

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Security teams have made great progress in improving password policies. In addition, tools like multifactor authentication (MFA) make it less likely that an attacker can simply “guess” a user’s credentials to gain access to an organization’s resources.

No matter how strong an organization’s policies are, however, compromised credentials—whether those of employees, contractors, or partners, present a unique defensive challenge. A stolen credential allows an attacker access to all the assets available to a legitimate user. If those credentials belong to privileged users, the attacker may be able to create new accounts, change permissions, and write data to devices.

Identity threat detection and response (ITDR) solutions add a proactive, specialized layer that focuses on detecting and handling threats targeting accounts and credentials rather than endpoints. The result is a strengthening of the organization’s security posture and a reduced likelihood of identity related breaches.

Enzoic’s Credential Intelligence for Authentication and Identity Workflows

New credentials are exposed every day through phishing, infostealer malware, and third-party breaches. Many of these credentials belong to employees who have already completed security awareness training and who follow established password policies. Manual breach hunting is impractical for most organizations, and time-based mandatory password resets are disruptive to all users.

Key Findings



ITDR Effectiveness

- 85% reported that their organizations currently deploy ITDR tools
- 55% experienced at least one identity-related cyberattack leading to unauthorized access within the past 12 months
- 21% reported multiple identity-related incidents



MFA Adoption and Enforcement

- Only 27% of organizations require MFA for all partners and contractors
- 38% enforce MFA on less than half of customer accounts



Where Critical Identities Reside

- 47% cite legacy/on-prem AD
- 43% cite cloud Infrastructure
- 38% cite DevOps/CI/CD pipelines
- 35% cite third-party integrations

Enzoic addresses this challenge with solutions that protect organizations from compromised credentials and account takeovers by screening passwords against continuously updated threat intelligence from breaches, the dark web, and other sources. These protections enable organizations to identify exposed credentials in real time while minimizing user friction and supporting compliance.

Enzoic reduces the burden on security teams by replacing manual breach-data investigations and broad password reset campaigns with automated, real-time password screening during creation and reset, continuous monitoring for newly exposed credentials, and targeted remediation limited to affected users. It also reduces demands on end users and help desks by eliminating time-based password resets in favor of ongoing monitoring—thereby avoiding unnecessary reset cycles and the associated support overhead.

Enzoic for Active Directory

Enzoic for Microsoft Active Directory (AD) is a lightweight plugin for on-premises AD environments. It prevents users from setting compromised or reused passwords by screening them in real time during creation or reset, while continuously monitoring existing credentials against Enzoic's updated database of billions of exposed passwords. Enzoic provides organizations with proactive protection against credential stuffing, account takeover, and unauthorized access without forcing blanket resets or adding significant user friction.

Enzoic APIs

Enzoic's APIs provide hosted REST endpoints for real-time compromised credential detection, drawing from a continuously updated database of billions of exposed passwords and credentials sourced from breaches, the dark web, and other leaks. These include:

- **Passwords API** to check whether a given password is known to be compromised, without needing to pass the exact password hash in
- **Credentials API** to securely look up whether a given username/password combination exists in the Enzoic database of compromised account credentials
- **Exposures API** to look up all the credentials exposures that have been found for a given email or domain and obtain detailed information about each exposure
- **Breach API** to provide real-time alerts when monitored emails or domains show up in a new breach

All Enzoic APIs integrate easily into authentication flows, IAM systems, fraud detection, and custom applications to block account takeovers and credential stuffing with minimal latency and friction.

Addressing the ITDR Effectiveness Paradox with Real-Time Compromised Credential Protection

Enzoic addresses several critical cybersecurity challenges identified in the SANS State of Identity Threat Detection and Response 2026 report.

The report calls out “The ITDR Effectiveness Paradox.” That is, while 85% of the respondents currently deploy ITDR tools, identity-related attacks continue to be successful —55% of the organizations surveyed experienced at least one identity-related cyberattack leading to unauthorized access in the last 12 months, and 21% reported more than one incident.

Many identity attacks succeed because most ITDR solutions focus on behavioral anomalies, anomalous logins, or post-authentication signals. However, the root cause for most breaches remains compromised credentials. Enzoic strengthens defenses by screening passwords in real time against billions of exposed credentials. This reduces reliance on anomaly detection and closes gaps in credential hygiene that ITDR alone may miss.

SANS’s report discusses a “Hierarchy of Protection” as a weakness in organizations’ defenses. Specifically, stricter authentication requirements for employees than for contractors, customers, and other third parties that may access an organization’s resources. The report found that 38% of organizations enforce MFA on less than half of customer accounts and 73% of organizations fail to enforce MFA on all partner/contractor accounts.

Supply chain attacks are an attractive vector for criminals. Not enforcing MFA on these accounts leaves organizations vulnerable to credential stuffing. Enzoic provides essential protection in environments without MFA by continuously screening passwords—of employees, partners, and customers—against its proprietary database of compromised credentials. Even when MFA is in place, it only provides true multifactor protection if the password is strong and uncompromised, since a weak or stolen password undermines the security of the first factor.

The report also cites the “Dispersion of Risk” that arises when identities no longer reside in a single directory. 47% reported their most important identities reside in on-premises AD and legacy applications, 43% use cloud infrastructure, and 35% cite third party integrations. This makes a strong case for extending compromised-password protection into the environments and workflows to manage risk in these areas, including AD and connected authentication and IAM workflows

Integrating Enzoic’s APIs into an organization’s workflow lets teams check for compromised or weak credentials at the point of authentication. This reduces account takeover risk, avoids blanket password resets, and focuses remediation on truly exposed users, strengthening security without adding friction for legitimate employees or customers.

Request a Demo: See ITDR in Action

Password strength and rotation policies are ineffective against stolen credentials. Request a demo today to see how Enzoic can detect exposed passwords and credentials early, stop account takeover, and respond faster with targeted remediation.

Note that SANS Product Briefings do not represent a SANS endorsement of a sponsor or its products, but rather an overview of its offerings and their capabilities.

PRODUCT BRIEFING

Closing the Detection to Containment Gap: Netwrix Identity Threat Detection and Response

Insights from SANS State of Identity Threat Detection and Response 2026

March 2026

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For years, many security teams assumed that modern authentication technologies like single sign-on and multi-factor authentication would significantly reduce the risk of breaches. Recent findings challenge that belief. Although security teams have addressed human access, the attack surface shifted to other vectors, including non-human identities (NHIs), post-authentication sessions, and autonomous AI agents.

Identity threat detection and response (ITDR) solutions add a proactive, specialized layer of security that focuses on detecting and handling threats targeting accounts and credentials rather than endpoints. The result is a strengthening of the organization's security posture and a reduced likelihood of identity related breaches.



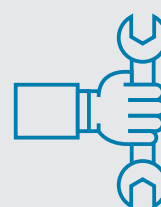
The Netwrix ITDR Solution

Netwrix PingCastle

Netwrix PingCastle is a security assessment tool for Microsoft Active Directory (AD) and Entra ID that rapidly identifies and prioritizes over 170 identity risks. Trusted across 45,000-plus domains in 193 countries, it maps vulnerabilities to MITRE and ANSSI standards, delivering actionable remediation steps to close security gaps efficiently.

PingCastle provides comprehensive coverage through detailed scans that uncover misconfigurations, weak permissions, and exposure paths in hybrid environments. PingCastle emphasizes clarity, producing prioritized insights and guidance that help organizations strengthen their identity infrastructure without overwhelming IT teams.

Key Findings



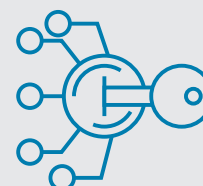
ITDR Adoption

- 85% reported that their organizations currently deploy ITDR tools
- 55% experienced at least one identity-related cyberattack leading to unauthorized access within the past 12 months. Even more concerning, 21% reported multiple incidents



Attack Detection and Containment

- 68% of organizations detect identity attacks within 24 hours
- Only 55% contain them in that same window



NHI Credential Management

- Only 8% of organizations rotate more than 75% of their non-human identity credentials on a 90-day cycle
- 59% rotate fewer than half quarterly



Netwrix Threat Manager

Netwrix Threat Manager uses machine learning and behavior analytics to identify sophisticated attacks and abnormal activities in real time. It detects threats such as DCSync, lateral movement in AD, Kerberos attacks, and insider risks that traditional security measures may overlook. Threat Manager links individual events into coherent attack chains, providing visual timelines that map identity-related incidents for clearer, faster investigations. Automated response features enable proactive blocking of threats and containment actions to minimize attacker dwell time and damage.



Netwrix Threat Prevention

Netwrix Threat Prevention proactively stops suspicious activities and risky changes in real time before they become security incidents. Unlike log-based detection, it intercepts and automatically blocks malicious actions at the source across critical systems. Threat Prevention uses behavior-based monitoring to identify insider threats, anomalous access patterns, and attacker escalation attempts, then provides real-time alerts with contextual details on blocked actions and reasons. Automated remediation capabilities include blocking risky changes, preventing further authentication from compromised accounts, and disrupting adversary footholds to enhance security and reduce breach impact.



Netwrix Privilege Secure

Netwrix Privilege Secure uses a zero standing privileges (ZSP) approach to eliminate always-on privileged accounts. Privileged accounts are activated only when access is required across servers, databases, network appliances and cloud environments. Privilege Secure controls sessions for monitoring, recording, and auditing as well as vaulting and rotating credentials. Local administrator accounts on endpoints are also disabled or removed unless needed to stop lateral and elevation.



Netwrix Identity Recovery

Netwrix Identity Recovery is a backup and recovery software solution designed for identity systems in hybrid environments. It enables granular rollback of accidental or malicious changes to objects, attributes, group memberships, group policy objects, and configurations across Microsoft AD, Microsoft Entra ID, and Okta. Identity Recovery allows point-in-time recovery, automated forest-wide restoration, and rapid remediation to minimize downtime and maintain business continuity.



Netwrix 1Secure ITDR

Netwrix ITDR capabilities are also available as SaaS through the Netwrix 1Secure platform, giving organizations the flexibility to choose the deployment model that fits their infrastructure and team. It includes:

- PingCastle-powered risk assessment with more than 210 security checks mapped to MITRE ATT&CK®, prioritized by impact so teams know exactly what to fix first
- AI-powered remediation guidance that provides tailored, step-by-step recommendations for closing gaps across hybrid AD and Entra ID environments
- Continuous monitoring with near real-time alerts on suspicious or unauthorized changes across AD and Entra ID
- Granular, point-in-time recovery for Entra ID and Okta objects and attributes, enabling rapid restoration after privilege escalation, misconfiguration, or malicious changes, without requiring a full-tenant rollback

Netwrix's Response to Critical Operational Challenges

Netwrix addresses several critical cybersecurity challenges identified in the SANS State of Identity Threat Detection and Response 2026 report.

The Non-Human Identity (NHI) Crisis

The report found that NHIs are the fastest-growing identity category, with 76% of organizations reporting growth. Although security teams know they have service accounts, API keys, and machine credentials, they lack full visibility into their proliferation within the organization. Further, concern about breaking production environments results in only 8% of the organizations surveyed rotating most of their NHI credentials every 90 days.

Netwrix ITDR brings visibility to previously unseen NHI accounts. It discovers hidden NHIs that evade traditional governance, monitors their activity for anomalies, and detects misuse or abnormal behavior. It then enforces policy-based controls and contains threats in compromised service accounts. Netwrix Privilege Secure reduces the risk posed by service accounts by continuously discovering privileged accounts, eliminating standing privilege through just-in-time access, and automating credential rotation with built-in rollback safeguards.

Most organizations detect identity attacks quickly—but far fewer can contain them before attackers escalate.

The Detection-to-Containment Gap

85% of respondents report that their organizations currently deploy ITDR tools. However, identity-related compromises remain persistent. The report points to ITDR deployments that exist “in name rather than in practice” or that are not operationalized. Although 68% of organizations detect identity attacks within 24 hours, only 55% contain them in that same window. In other words, attackers escalate privileges and move laterally while the SOC triages alerts.

Netwrix Threat Manager's automated response workflows close this gap: When a high-confidence alert fires for known threats, automated actions, such as account isolation, session revocation, and ticket creation, can be configured to execute in minutes without waiting for a human analyst.

Fragmented Visibility

While identities once resided in a single directory, they now live in what the report calls a “fractured landscape” across legacy AD, cloud infrastructure, DevOps pipelines, and third-party integrations like OAuth. Since no single pane of glass exists, analysts must pivot between multiple consoles to reconstruct an attack chain. Netwrix collapses this to a single automated workflow. For organizations that process 20 to 50 identity alerts per week, this recovers 10 to 20 analyst hours weekly.

Request a Demo: See ITDR in Action

At a time when security headcount is constrained and identity attacks are increasing in volume and sophistication, Netwrix enables a lean team to operate with the coverage and response times of a SOC three times its size. Want to see it in action? Get a live demo at www.netwrix.com.

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PRODUCT BRIEFING

Detect, Rollback, Recover: Rubrik Identity Security and Resilience

Insights from SANS State of Identity Threat Detection and Response 2026

March 2026

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For years, security teams have struggled with variations of the “castle and moat” strategy: Keep adversaries out through strong identity and access management solutions. The SANS State of Identity Threat Detection and Response 2026 report proves this strategy is insufficient. While identity security tools are deployed widely, successful attacks continue to damage enterprises of all sizes. The reason? Attackers now “log in” rather than “break in,” with over 80% of cyberattacks exploiting compromised credentials or misconfigured privileges to move laterally and disrupt business.

Identity threat detection and response (ITDR) solutions go further, delivering a targeted, proactive layer of defense focused specifically on protecting user identities and credentials. By detecting anomalous behaviors, compromised accounts, and credential abuse in real time, ITDR strengthens an organization’s overall security posture and significantly reduces the likelihood of successful identity-based breaches.

Rubrik Identity Security

Rubrik provides organizations with cyber resilience and data security and recovery solutions. Its platform protects enterprise data across on-premises, cloud, and SaaS environments with immutable backups, rapid recovery from ransomware and other incidents, threat detection, and automated remediation to minimize downtime and data loss. Out-of-the-box policies that map to common regulatory frameworks make it easier to align to security policies and business needs.

Rubrik Identity Resilience

Rubrik Identity Resilience provides visibility, monitoring, response, and recovery for identity environments across hybrid setups. It delivers comprehensive protection, visibility, response, and recovery for hybrid identity environments, covering on-premises Microsoft Active Directory (AD), Entra ID, and Okta for both human and non-human identities (NHIs). It features immutable, air-gapped backups with orchestrated multi-IdP recovery, real-time monitoring and instant rollback of critical changes, and proactive detection and remediation of misconfigurations, overprovisioned privileges, and stale accounts.

Key Findings



ITDR Effectiveness

- 85% reported that their organizations currently deploy ITDR tools
- 55% experienced at least one identity-related cyberattack leading to unauthorized access within the past 12 months
- 21% reported multiple identity-related incidents
- 68% of organizations detect identity attacks within 24 hours, but only 55% contain them in that same window



Barriers to Adoption

- 32% Cloud and SaaS limitations
- 31% Legacy apps lacking modern authentication
- 27% Tool sprawl/integration gaps
- 22% Unclear identity inventory or ownership



NHI Credential Management

- 73% use or support agentic AI or automations that use credentials or tokens to take actions
- Only 8% of organizations rotate more than 75% of their non-human identity credentials on a 90-day cycle
- 59% rotate fewer than half quarterly

Rubrik Agent Cloud

Rubrik Agent Cloud serves as a control layer to manage risks in agentic AI deployments across environments like Microsoft Copilot Studio and others. It sits between applications, AI agents, and underlying large language models (LLMs) to provide monitoring, governance, and remediation capabilities. Agent Cloud tracks agent actions with visibility into data access, identity context, and behavior across platforms. It enforces policies and guardrails in real time to block risky activities. When errors occur, it supports instant remediation including undoing or rewinding destructive actions without causing downtime or data loss.

Rubrik's Response to Critical Operational Challenges

Rubrik addresses several critical cybersecurity challenges identified in the SANS State of Identity Threat Detection and Response 2026 report.

The Failure of Traditional Controls

55% of organizations experienced at least one identity-related cyberattack leading to unauthorized access in the past 12 months. Worse, 21% acknowledged more than one attack. Once attackers obtain valid credentials, tokens, or session access, traditional defenses may not detect the activity quickly enough to prevent lateral movement or privilege escalation. This is supported by the study, which found that while 68% of organizations detect identity attacks within 24 hours, only 55% contain them in that same window.

Rubrik Identity Resilience focuses on helping organizations detect and respond to identity compromises and restore trusted identity systems after an attack. The platform provides visibility into identity activity across hybrid and multi-IdP environments, detection of abnormal identity behavior and indicators of exposure, and rapid recovery of identity infrastructure such as AD, Entra ID, and Okta. It helps organizations move beyond simply preventing identity attacks to containing and recovering from them quickly.

ITDR Effectiveness

Many organizations have deployed identity security tools—including 85% of the study's respondents—but they still struggle to operationalize them. In response to what barriers teams face in successfully deploying ITDR, 32% of respondents cited cloud and SaaS limitations and 31% mentioned legacy applications not supporting modern authentication. A further 27% said tool sprawl and lack of integration, while 22% cited a lack of clear identity inventory or ownership.

Solving this problem is not simple. Identity systems span multiple environments, including on-premises directories, cloud identity providers, SaaS applications, and infrastructure platforms. Fragmented tooling and siloed tools mean security teams often lack a unified view of identities across these systems, which makes it difficult to detect risky behavior and understand the full blast radius of a compromised account, both of which slow incident response.

Rubrik Identity Resilience allows teams to monitor for and resolve misconfigurations and weak policies across hybrid environments through a single interface. Unified visibility helps security teams maintain a comprehensive inventory of identities, understand identity relationships and privileges, and investigate suspicious behavior more quickly.

Non-Human Identities

73% of the respondents reported using or supporting agentic AI or automations that use credentials or tokens to take actions in their environments. These non-human identities (NHIs) include service accounts, API keys, and automation bots that authenticate continuously (but do not use MFA) and often hold elevated privileges because they automate critical infrastructure tasks. NHIs are the fastest-growing attack surface but are also frequently neglected. The report found that only 8% of organizations rotate most (>75%) of their NHI credentials every 90 days and 15% admit they do not know their rotation rate.

Rubrik Agent Cloud solves this by acting as the essential security layer, providing real-time visibility into what agents are doing, enforcing real-time custom guardrails with AI, and offering remediation to instantly undo any destructive actions. We marry deep identity and data context with agent understanding to govern the new autonomous workforce.

Request a Demo: See ITDR in Action

When your data is secure, your business becomes unstoppable. Request a demo today to see how Rubrik can keep data resilient against cyber threats.

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